Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claims 1-48 (canceled)

Claim 49 (currently amended): A method of desorbing a macromolecular analyte from a probe surface comprising the steps of:

a) providing a **rigid and structurally self-supporting** probe that is removably insertable into a **laser desorption ionization** mass spectrometer, the probe having a surface for presenting the macromolecular analyte to **a laser desorption ionization** ~~at least one single~~ energy source that emits **laser** energy capable of desorbing and ionizing the macromolecular analyte from the probe for analyte detection, wherein at least the surface comprises a non-metallic-material selected from the group consisting of polystyrene, polypropylene, polyethylene, polycarbonate, nylon, starch, agarose, and dextran~~, wherein the probe for presenting the analyte is not associated with a separate sample holder~~; and

b) exposing the macromolecular analyte on the probe surface to energy from **a laser desorption ionization** ~~at least one single~~ energy source, whereby the macromolecular analyte is desorbed and ionized.

Claim 50 (canceled)

Claim 51 (currently amended): The method of claim ~~50~~ **49** further comprising after step (b) the steps of:

c) modifying the macromolecular analyte chemically or enzymatically while deposited on the probe surface; and

d) repeating step (b).

Claim 52 (currently amended): The method of claim ~~50~~ **49** wherein the probe surface comprises an array of locations, each location having at least one macromolecular analyte deposited thereon; and step (b) comprises desorbing and ionizing a first macromolecular analyte from a first location in the array;

and wherein the method further comprises the step of (c) desorbing and ionizing a second macromolecular analyte, from a second location in the array.

Claim 53 (currently amended): The method of claim ~~50~~ **49** further comprising before step (b) the step of modifying the macromolecular analyte chemically or enzymatically while deposited on the probe surface.

Claims 54-62 (canceled)

Claim 63 (currently amended): The method of claim ~~50~~ **49** wherein the macromolecular analyte comprises a protein or a peptide.

Claim 64 (currently amended): A system for detecting a macromolecular analyte comprising:

a removably insertable **rigid and structurally self-supporting** probe having a surface for presenting the macromolecular analyte to **a laser desorption ionization** ~~at least one single~~ energy source that emits energy capable of desorbing and ionizing the macromolecular analyte from the probe, wherein at least the surface comprises a non-metallic material selected from the group consisting of polystyrene, polypropylene, polyethylene, polycarbonate, nylon, starch, agarose, and dextran;

a laser desorption ionization ~~at least one single~~ energy source that directs **laser** energy to the probe surface for desorbing and ionizing the macromolecular analyte, ~~wherein the probe for presenting the analyte is not associated with a separate sample holder~~; and

a detector in communication with the probe surface that detects the desorbed macromolecular analyte.

Claim 65 (Currently amended): The system of claim 64 ~~which is a laser desorption mass spectrometer~~ wherein:

~~the energy source emits laser light that desorbs and ionizes the macromolecular analyte to produce an ion,~~

the system further comprises means for accelerating the ion to the detector,

the detector detects the ion, and

the system further comprises means for determining the mass of the ion.

Claims 66-85 (canceled)

Claim 86 (currently amended): A method for detecting a macromolecular analyte comprising the steps of:

a) providing a system comprising:

(1) a removably insertable **rigid and structurally self-supporting** probe having a surface for presenting the macromolecular analyte to **a laser desorption ionization** ~~at least one single~~ energy source that emits energy capable of desorbing and ionizing the macromolecular analyte from the probe, wherein at least the surface comprises a non-metallic material selected from the group consisting of polystyrene, polypropylene, polyethylene, polycarbonate, nylon, starch, agarose, and dextran, wherein the macromolecular analyte is presented on the probe surface, ~~wherein the probe for presenting the analyte is not associated with a separate sample holder~~,

(2) **a laser desorption ionization** ~~at least one single~~ energy source that directs **laser** energy to the probe surface for desorbing and ionizing the macromolecular analyte; and

(3) a detector in communication with the probe surface that detects the desorbed and ionized macromolecular analyte;

b) desorbing and ionizing at least a portion of the macromolecular analyte from the surface by exposing the macromolecular analyte to energy from **the laser desorption ionization** ~~at least one single~~ energy source; and

c) detecting the desorbed and ionized macromolecular analyte with the detector.

Claim 87 (currently amended): The method of claim 86 wherein ~~the system is a laser desorption mass spectrometer wherein the energy source emits laser light that desorbs and ionizes the macromolecular analyte to produce an ion, the detector detects the ion and~~ the system further comprises means for accelerating the ion to the detector, and the method further comprises determining the mass of the ion.

Claim 88 (previously presented): The method of claim 87 further comprising before step (b) the step of modifying the macromolecular analyte chemically or enzymatically while deposited on the probe surface.

Claim 89 (previously presented): The method of claim 87 further comprising after step (c) the steps of:

d) modifying the macromolecular analyte chemically or enzymatically while deposited on the probe surface; and

e) repeating steps b) and c).

Claim 90 (previously presented): The method of claim 87 wherein the probe surface comprises an array of locations, each location having at least one macromolecular analyte deposited thereon; and step (b) comprises desorbing and ionizing a first macromolecular analyte from a first location in the array;

and wherein the method further comprises the step of:

d) desorbing and ionizing a second macromolecular analyte from a second location in the array; and

e) detecting the desorbed and ionized second macromolecular analyte with the detector.

Claims 91-100 (canceled)

Claim 101 (previously presented): The method of claim 87 wherein the macromolecular analyte comprises a protein or a peptide.

Claims 102-104 (canceled)

Claim 105 (currently amended): The method of claim ~~50~~ **49**, wherein the macromolecular analyte is a biomolecule.

Claim 106 (currently amended): The method of claim ~~50~~ **49**, wherein the macromolecular analyte is a biomolecule from an undifferentiated sample.

Claim 107 (currently amended): The method of claim ~~50~~ **49**, wherein the macromolecular analyte is a nucleic acid.

Claim 108 (previously presented): The system of claim 65, wherein the macromolecular analyte is a biomolecule.

Claim 109 (previously presented): The system of claim 65, wherein the macromolecular analyte is a biomolecule from an undifferentiated sample.

Claim 110 (previously presented): The system of claim 65, wherein the macromolecular analyte is a protein or a peptide.

Claim 111 (previously presented): The method of claim 87, wherein the macromolecular analyte is a biomolecule.

Claim 112 (previously presented): The method of claim 87, wherein the macromolecular analyte is a biomolecule from an undifferentiated sample.

Claim 113 (previously presented): The method of claim 87, wherein the macromolecular analyte is a protein or a peptide.

Claims 114-119 (canceled)

Claim 120 (currently amended): The method of claim ~~50~~ **49**, wherein the macromolecular analyte is a carbohydrate.

Claim 121 (previously presented): The system of claim 65, wherein the macromolecular analyte is a nucleic acid.

Claim 122 (previously presented): The system of claim 65, wherein the macromolecular analyte is a carbohydrate.

Claim 123 (previously presented): The method of claim 87, wherein the macromolecular analyte is a nucleic acid.

Claim 124 (previously presented): The method of claim 87, wherein the macromolecular analyte is a carbohydrate.

Claim 125 (currently amended): The method of any of claims ~~49-53, 56, 57~~ **49, 51-53**, 63, 105-107, 120 or 130-134 further comprising **applying to** the macromolecular analyte ~~associated with~~ a matrix material for promoting desorption and ionization of the macromolecular analyte on the surface.

Claim 126 (currently amended): The method of any of claims ~~64-71, 75, 76, 82~~ **64-65**, 108-110, 121, 122 or 137-141 further comprising **applying to** the macromolecular analyte ~~associated with~~ a matrix material for promoting desorption and ionization of the macromolecular analyte on the surface.

Claim 127 (currently amended): The method of any of claims ~~86-91~~ **86-90**, 94, 95, 101, 111-113, 123, 124 or 144-148 further comprising **applying to** the macromolecular analyte ~~associated with~~ a matrix material for promoting desorption and ionization of the macromolecular analyte on the surface.

Claims 128-129 (canceled)

Claim 130 (previously presented): The method of claim 49 wherein the non-metallic material is polystyrene.

Claim 131 (previously presented): The method of claim 49 wherein the non-metallic material is polypropylene.

Claim 132 (previously presented): The method of claim 49 wherein the non-metallic material is polycarbonate.

Claim 133 (previously presented): The method of claim 49 wherein the non-metallic material is nylon.

Claim 134 (previously presented): The method of claim 49 wherein the non-metallic material is dextran.

Claims 135-136 (canceled)

Claim 137 (previously presented): The system of claim 64 wherein the non-metallic material is polystyrene.

Claim 138 (previously presented): The system of claim 64 wherein the non-metallic material is polypropylene.

Claim 139 (previously presented): The system of claim 64 wherein the non-metallic material is polycarbonate.

Claim 140 (previously presented): The system of claim 64 wherein the non-metallic material is nylon.

Claim141 (previously presented): The system of claim 64 wherein the non-metallic material is dextran.

Claims 142-143 (canceled)

Claim 144 (previously presented): The method of claim 86 wherein the non-metallic material is polystyrene.

Claim 145 (previously presented): The method of claim 86 wherein the non-metallic material is polypropylene.

Claim 146 (previously presented): The method of claim 86 wherein the non-metallic material is polycarbonate.

Claim 147 (previously presented): The method of claim 86 wherein the non-metallic material is nylon.

Claim 148 (previously presented): The method of claim 86 wherein the non-metallic material is dextran.